Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original) A method of imparting substantial insect resistance to a plant comprising:

   introducing to said plant a polynucleotide comprising: a nucleotide sequence which encodes upon expression a basement membrane degrading protease insect toxin, said nucleotide sequence operably linked to regulatory elements capable of directing expression thereof in a host cell.

2. (Original) The method of claim 1 wherein said host cell is a plant cell.

3. (Original) The method of claim 1 wherein said polynucleotide is a vector.

4. (Original) The method of claim 3 wherein said vector is a plasmid vector.

5. (Original) The method of claim 3 wherein said vector is a viral vector.

6. (Original) The method of claim 5 wherein said viral vector is capable of transforming a plant cell.

7. (Original) The method of claim 6 wherein said vector is a Agrobacterium based vector.

8. (Original) The method of claim 3 wherein said vector is capable of transforming an insect cell.

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9. (Original) The method of claim 8 wherein said vector is an infectious baculovirus based vector.

10. (Original) The method of claim 1 wherein said step of introducing comprises:

topically administering said vector to plants.

11. (Original) The method of claim 1 wherein said step of introducing further comprises: transforming a plant cell with said vector.

12. (Original) The method of claim 1 wherein said protease is selected from the group consisting of:

a metalloproteinase, a collagenase, a gelatinase, a stromelysin, a cysteine protease, and basement membrane degrading proteases from snake venom, invertebrates, fungi, and bacteria.

13. (Original) The method of claim 12 wherein said protease is selected from the group consisting of:

interstitial collagenase, fibroblast collagenase, Collagenase-3 Neutrophil collagenase, PMN-type collagenase, Gelatinase A, (72 kDa type IV collagenase), Gelatinase B (92 kDa type IV collagenase), Stromelysin-1, Stromelysin-2, Stromelysin-3, Matrilysin, Metalloelastase, Cathepsin B, Cathepsin L, Cathepsin N, Crotalus atrox, hemorrhagic metalloproteinases: (Ht-a, Ht-c, Ht-d, and Ht-e), Hypoderma lineatum (fly) collagenase, Uca pugilator (crab) collagenolytic endopeptidase, Entomophthora collagenase, Clostridium histolyticum collagenase, Streptomyces collagenase, and Serratia marcescens cysteine endopeptidase.

15. (Original) The method of claim 14 wherein said cathepsin L protease is from the facefly Sarcophaga peregrina.

16. (Original) An insecticidal composition comprising:

a recombinant basement membrane degrading protease protein and a carrier.

17. (Currently amended) The composition of claim 16 ~~claim 1~~ wherein said protease is selected from the group consisting of:

a metalloprotease, a collagenase, a gelatinase, a stromelysin, a cysteine protease, and basement membrane degrading proteases from snake venom, invertebrates, fungi, and bacteria.

18. (Currently amended) The composition of claim 17 ~~claim 2~~ wherein said protease is selected from the group consisting of:

interstitial collagenase, fibroblast collagenase, Collagenase-3 Neutrophil collagenase, PMN-type collagenase, Gelatinase A, (72 kDa type IV collagenase), Gelatinase B (92 kDa type IV collagenase), Stromelysin-1, Stromelysin-2, Stromelysin-3, Matrilysin, Metalloelastase, Cathepsin B, Cathepsin L, Cathepsin N, Crotalus atrox, hemorrhagic metalloproteinases: (Ht-a, Ht-c, Ht-d, and Ht-e), Hypoderma lineatum (fly) collagenase, Uca pugilator (crab) collagenolytic endopeptidase, Entomophthora collagenase, Clostridium histolyticum collagenase, Streptomyces collagenase, and Serratia marcescens cysteine endopeptidase.

19. (Original) The composition of claim 17 wherein said protease is a cathepsin L protease.

20. (Original) The protease of claim 19 wherein said cathepsin L protease is from the facefly Sarcophaga peregrina.

21. (Original) An expression construct comprising:

a gene which encodes a basement membrane degrading protease operably linked to a promoter, said promoter capable of directing expression in an insect cell.

22. (Original) The expression construct of claim 21 wherein said promoter is selected from the group consisting of:

p6.9 and ie-1.

23. (Original) The expression construct of claim 21 wherein said protease is selected from the group consisting of:

a metalloprotease, a collagenase, a gelatinase, a stromelysin, a cysteine protease, and basement membrane degrading proteases from snake venom, invertebrates, fungi, and bacteria.

24. (Original) The expression construct of claim 23 wherein said protease is selected from the group consisting of:

interstitial collagenase, fibroblast collagenase, Collagenase-3 Neutrophil collagenase, PMN-type collagenase, Gelatinase A, (72 kDa type IV collagenase), Gelatinase B (92 kDa type IV collagenase), Stromelysin-1, Stromelysin-2, Stromelysin-3, Matrilysin, Metalloelastase, Cathepsin B, Cathepsin L, Cathepsin N, Crotalus atrox, hemorrhagic metalloproteinases: (Ht-a, Ht-c, Ht-d, and Ht-e), Hypoderma lineatum (fly) collagenase, Uca pugilator (crab) collagenolytic endopeptidase, Entomophthora collagenase, Clostridium histolyticum collagenase, Streptomyces collagenase, and Serratia marcescens cysteine endopeptidase.

25. (Original) The expression construct of claim 24 wherein said protease is a cathepsin L protease.

26. (Original) The expression construct of claim 25 wherein said cathepsin L protease is from the facefly Sarcophaga peregrina.

27. (Original) A vector comprising the expression construct of claim 21.

28. (Original) The vector of claim 27 wherein said vector is a viral vector.

29. (Original) The vector of claim 28 wherein said vector is capable of infecting an insect cell.

30. (Original) The vector of claim 27 wherein said vector is selected form the group consisiting of:

bacteria (e.g., Bacillus thuringiensis and Bacillus popiliae), viruses (e.g., nucleopolyhedroviruses) and protozoa (e.g., the microsporidian Nosema locustae).

31. (Original) The vector of claim 30 wherein said vector is AcIE1TV3.STR1, AcMLF9.STR1, AcIE1TV3.GEL, AcMLF9.GEL, AcIE1TV3.ScathL, and AcMLF9.ScathL.

32. (Original) A h[illegible] cell comprising the vector of claim 27.

33. (Original) The host cell of claim 32 wherein said host cell is a plant cell.

34. (Original) A transgenic plant which is substantially resistant to insect infestation comprising the vector of claim 27.

35. (Original) Seed of the plant of claim 34.

36. (Previously added) A transgenic plant which is protected from damage caused by an insect feeding said plant comprising a transformed host organism capable of expressing a basement membrane degrading protease.

37. (Currently amended) The transgenic plant of claim 36 ~~claim 39~~ wherein the host organism is selected from the group consisting of bacteria, viruses and protozoa.

38. (Currently amended) The transgenic plant of claim 37 ~~claim 40~~ wherein said host organism is an insect virus.

39. (Currently amended) The transgenic plant of claim 38 ~~claim 41~~ wherein the insect virus is a baculovirus.

40. (Currently amended) The transgenic plant of claim 36 ~~claim 39~~ wherein the protease is selected from the group consisting of interstitial collagenase, fibroblast collagenase, Collagenase-3 Neutrophil collagenase, PMN-type collagenase, Gelatinase A, (72 kDa type IV collagenase), Gelatinase B (92 kDa type IV collagenase), Stromelysin-1, Stromelysin-2, Stromelysin-3, Matrilysin, Metalloelastase, Cathepsin B, Cathepsin L, Cathepsin N, Crotalus atrox, hemorrhagic metalloproteinases: (Ht-a, Ht-c, Ht-d, and Ht-e), Hypoderma lineatum (fly) collagenase, Uca pugilator (crab) collagenolytic endopeptidase, Entomophthora collagenase, Clostridium histolyticum collagenase, Streptomyces collagenase, and Serratia marcescens cysteine endopeptidase.

41. (Currently amended) The transgenic plant of claim 40 ~~claim 42~~ wherein the protease is a cathepsin ~~L.~~ L protease.